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EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/512,097
Filing Date: May 17, 2005
Appellant(s): SIMONSEN, PER SJORUP

Marvin Petry
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed February 28, 2007 appealing from the Office action mailed July 26, 2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is substantially correct. 37 CFR 41.37(c)(1)(v) requires the summary of claimed subject matter to include: (1) a concise explanation of the subject matter defined in each of the independent claims involved in the appeal, referring to the specification by page and line number, and to the drawing, if any, by reference characters and (2) for each independent claim involved in the appeal and for each dependent claim argued separately, every means plus function and step plus function as permitted by 35

U.S.C. 112, sixth paragraph, must be identified and the structure, material, or acts described in the specification as corresponding to each claimed function must be set forth with reference to the specification by page and line number, and to the drawing, if any, by reference characters. While the description of the claimed subject matter in the second through sixth paragraphs on page 3 of the Brief and the first full paragraph on page 4 of the brief is correctly described, the earlier matter amounts to argument and is not part of the summary. Whether the claimed invention is a "new and non-obvious" method for producing gelatin is precisely what will be decided by the instant appeal. Allegations of unexpectedly superior results and, arguments regarding the new matter rejection under this section will be addressed later in the Examiner's Answer.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The following rejection has been withdrawn.

WITHDRAWN REJECTIONS

The rejection of claims 1-4 under 35 USC 102(b) as being anticipated by Lilja et al. is not presented for review on appeal because it has been withdrawn by the examiner in response to the arguments in the Appeal Brief. The rejection of claim 5 under 35 USC 102(b) as being anticipated by Lilja et al. is not withdrawn.

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(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

WO 9421739 A1

LILJA et al.

9-1994

Haack et al., Mechanical Deboning of Poultry and Fish and Defatting of Rinds Using the SFW 160 Separator (II), Fleisch, 1984, Vol. 38, No. 3, pages 58-60.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

35 USC 102 (b)

Claim 5 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Lilja et al. (1994).

Lilja et al. teach a gelatin product which, after testing, has a bloom number of 300 and 73% yield upon ultrafiltration, (see Table, page 15). This clearly anticipates claim 5.

35 USC 103 (a)

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being obvious over Lilja et al. (1994) in view of Haack et al. (1984).

Applicant claims a method for producing gelatin comprising the following steps: chopping or cutting a rind; defatting the rind using steam and/or hot water; hydrolyzing

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the defatted rind using an acid; neutralizing the hydrolyzed rind material; and extracting the neutralized rind material with water to form gelatin (see claim 1).

Lilja et al. teach a method for producing gelatin in **claim 1** from collagen-containing raw materials such as hide (split, rind) and other connective-tissue material (see page 2, line 35 – page 3, line 2) comprising the following steps: a) grinding the raw material to a particle size not exceeding 1 mm, b) mixing the ground raw material with water to form a slurry, c) subjecting the slurry from step b), **in optional order**, to an adjustment of the pH to 2-5 and to an adjustment of the temperature to 60-130 °C for a time from 1 second to 1 hour, d) adjusting the temperature of the slurry once more, f) adjusting the pH of the slurry or the liquid portion by using an alkaline chemical such as calcium hydroxide (see page 9, lines 26-34), and g) recovering the gelatin from the liquid portion in filtering steps and/or other cleaning steps.

Lilja et al. further teach that this method may be implemented in one step, i.e., continuously (see page 11, lines 25-28) and that the collagen-containing raw material may be defatted prior to grinding not to exceed 3 % by weight (see page 7, lines 9-12).

Haack et al. teach that defatted pork rind granules are useful in the manufacture of gelatin, see abstract. Haack et al. further teach that their method includes defatting the rind before acid hydrolysis for manufacture of the gelatin product, (see Figure 4, page 5-6).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to follow the method for producing gelatin by Lilja et al. with the

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defatting of pork rind teachings of Haack et al. with the expectation of enhancing the production yield of gelatin.

35 USC 112, First Paragraph, Written Description, New Matter

Claim 6 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 6 is directed to the method of claim 1, wherein cutting or chopping comprises cutting or chopping a rind into pieces not less than 1 mm.

However, cutting or chopping a rind into pieces not less than 1 mm is not disclosed in the specification, and is therefore new matter. There is no disclosure of a lower end of the range of rind sizes. In fact, there is no disclosure of a range; there is merely disclosure of two representative sizes: 1mm (page 1, lines 30-31) and approximately 5 mm (page 2, lines 21-22) of preferably cutting a rind into pieces not less than 1 mm.

The guidance found at page 1, lines 30-31, of the specification merely states that if the rind is sufficiently comminuted. This is insufficient support for claims to an explicit lower limit.

35 USC 103 (a)

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lilja et al. in view of Haack et al.

Lilja et al. teach a method for producing gelatin in **claim 1** from collagen-containing raw materials such as hide (split, rind) and other connective-tissue material (see lines 35-2, page 2-3) comprising the following steps: a) grinding the raw material to a particle size not exceeding 1 mm, b) mixing the ground raw material with water to form a slurry, c) subjecting the slurry from step b), **in optional order**, to an adjustment of the pH to 2-5 and to an adjustment of the temperature to 60-130 °C for a time from 1 s to 1 h, d) adjusting the temperature of the slurry once more, f) adjusting the pH of the slurry or the liquid portion by using an alkaline chemical such as calcium hydroxide (see lines 26-34, page 9), and g) recovering the gelatin from the liquid portion in filtering steps and/or other cleaning steps.

Haack et al. teach that defatted pork rind granules are useful in the manufacture of gelatin, see abstract. Haack et al. further teach that his method includes defatting the rind before acid hydrolysis for manufacture of the gelatin product, (see Figure 4, page 5-6).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to follow the method by Lilja et al. for producing gelatin by grinding the collagen-containing raw material not exceeding 1 mm, defat pork rinds before hydrolysis of the gelatin product following the teachings of Haack et al. with the expectation of enhancing the production yield of gelatin.

Hence, it would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to cut rind into a size not exceeding 1 mm or into

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whatever size pieces necessary in order to carry out the method for producing gelatin taught by Lilja et al.

(10) Response to Argument

Appellant first argues that Lilja et al. do not anticipate claims 1-5. As stated above, Examiner finds the arguments with regard to claims 1-4 convincing and the rejection of claims 1-4 under 35 USC 102(b) as clearly anticipated by Lilja et al. is hereby withdrawn. With regard to claim 5, Appellant argues, "Claim 5 is directed to the product of the method of claim 1, which Lilja fails to teach or suggest." Examiner reminds Appellant that the patentability of a product by process resides in the product, *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). There has been no evidence presented to show that the gelatin produced by the claimed process is any different from gelatin made by any other process. Examiner must, therefore, conclude that gelatin is gelatin and the anticipation rejection must be maintained.

Appellant argues that claims 1-5 are not obvious over Lilja et al. in view of Haack et al. because the combined teachings would lead one of ordinary skill in the art to use mechanical defatting, not hot water or steam and, therefore, the combined teachings do not teach or suggest defatting a rind using steam and/or hot water. Appellant further argues that Lilja et al. in combination with Haack et al., fails to teach or suggest defatting a rind using hot water or steam prior to hydrolysis as instantly claimed. Appellant points out that Lilja et al. teach an optional defatting step and mixing the ground collagen-containing raw material with water to form a slurry. Appellant argues

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that Lilja et al., “fails to teach or suggest in any way that its 60-130°C slurry step is a defatting step.”

Appellant’s arguments are not found persuasive for many reasons. Lilja et al. clearly teach mixing the ground raw material with water to form a slurry, and then subjecting the slurry to a temperature of 60-130°C for a time of 1 second to 1 hour. 130°C converts to 266°F. Fat melts at that temperature. The inescapable conclusion is that, when the slurry of Lilja et al. is heated to 130°C for one hour the fat in the rind will melt. Therefore, subjecting a slurry, comprising water, at these high temperatures reads on a method wherein the ground material is extracted with hot water and/or steam. One of ordinary skill in the art would have immediately appreciated that the necessary result of heating fat-containing rind at 130°C for one hour will cause the fat to melt and, thus, be removed from the rind.

In addition, Appellant repeatedly makes the point that “one of ordinary skill in the art would not refer to the hot water/heating slurry formation as a defatting step.” Whether said person would refer to that step as a defatting step or not, the result is that the fat would have to melt off the rind when treated at 130°C for one hour in hot water.

Furthermore, Lilja et al. teach that the raw material may be defatted prior to grinding, (see page 7, lines 9-12). Since Lilja et al. teach that the raw material may be defatted prior to grinding, and the grinding step is prior to hydrolysis by acid, it logically follows that Lilja et al. teach a method for defatting the raw material prior to hydrolysis, (refer to page 5, lines 8-27).

For the first time, Appellant argues that “the combined teachings of Lilja et al. and Haack et al. would lead one of ordinary skill in the art to use mechanical defeating, not hot water or steam and, therefore, the combined teachings of Lilja et al. and Haack et al. fail to teach or suggest the claimed defatting of a rind using steam of hot water.”

While Examiner agrees that Haack et al. teach mechanical deboning and defatting, they also teach a step characterized as thermal processing of rinds in the water bath (Key number 3 in Figure 4). The abstract makes it clear that the end result is a defatted rind granulate, which may be used for gelatin manufacture. Thus, the combination of the teaching of Lilja et al. to heat the rind at 130°C for one hour and the thermal treatment of the rind in the water bath taught by Haack et al. provides sufficient motivation for one of ordinary skill in the art to defat the rind by heating rind combined with water to 130°C for one hour. The possibility of subsequent defatting by either more exposure to hot water or steam or, even, mechanical, does not detract from the expectation of success that exposing a slurry of rind in water to 130°C for one hour would defat the rind.

Further with regard to motivation, Lilja et al. teach that the collagen-containing raw material may optionally be defatted prior to grinding, and provides the motivation to combine the defatting pork rind teachings of Haack et al. by stating that, “although such a step is not critical, **a low fat content facilitates subsequent process steps.**” (see page 7, lines 9-12). Although Lilja et al. teach that the defatted raw material step is optional, it states that such a step facilitates subsequent process steps, which, when added to the teachings of Haack et al. further underscores the ample motivation to defat with hot water.

The next argument, found in the second and third paragraphs on page 7 of the Brief, is that the instantly claimed process yields unexpectedly superior results. The specification states that the yield of high Bloom gelatin is typically 50% to 60% of the gelatin present in the rind, i.e., about 50% higher than by using the conventional method, and the produced gelatin has a higher strength than the gelatin produced by the conventional method, page 1, lines 19-22. At page 2, lines 29-31, the specification states that the product obtained amounts to 43% of the gelatin present with a Bloom strength of 335. Page 15 of Lilja et al. shows that they achieved 73% yield with a Bloom number of 300. While the Bloom number obtained in the specification is higher, there is no showing as to why this result would be unexpected and not merely a result within the normal range obtainable by following the conventional processes. Also, there is no nexus between the result shown in the specification and the claims, any showing of unexpected results must be commensurate in scope with the claims and there is nothing to indicate what it is about the process **as claimed** that would provide the alleged unexpected result.

Appellant's last argument deals with the new matter rejection and is found in the third full paragraph on page 8 of the Brief. Appellant argues that the disclosed examples of "approximately 5 mm" and "e.g., 1 mm" supports the claimed limitation of pieces not less than 1 mm. Examiner respectfully disagrees with this argument. The abbreviation "e.g." stands for the Latin *exempli gratia*, which means "for example". A value that is exemplified does not limit the claim to that value, an example is just that, one member of a group defined by the terms. In this case, an example of an

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appropriate particle size is 1 mm. This is not the only size that would work, clearly, since the specification contains another example of particle size of "approximately 5 mm" and original claim 4 recites "5 mm or less". The limitation, "not less than 1 mm" means that no particles having a size smaller than 1 mm are permitted. However, the example of 1 mm says nothing about precluding particles that are smaller than 1 mm since it is only an example of a suitable particle size. Thus, the specification as filed does not provide support for, "not less than 1 mm", even though Appellant would have it so.

Appellant argues that claim 6 is not rendered obvious by Lilja et al. in view of Haack et al. because Lilja et al. teach away from the claimed not less than 1 mm pieces. Examiner must respectfully disagree. At page 5, lines 11 and 12 they teach grinding the raw material to a particle size not exceeding 1 mm. The intersection between "not less than 1 mm" and "not exceeding 1 mm" is, of course, "1 mm". Examiner does not understand how a clear teaching of "1 mm" can be seen as a teaching away of particle size of 1 mm.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.


Respectfully submitted,

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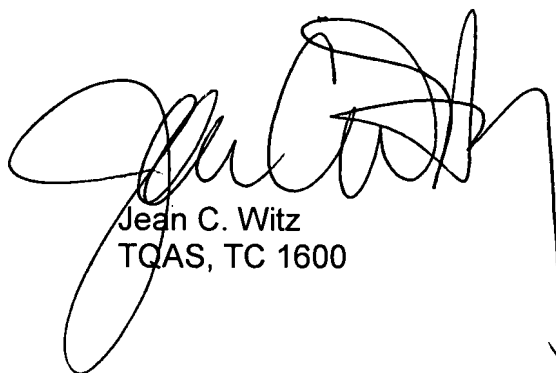
A handwritten signature in black ink, appearing to read 'Robert A. Wax'.

Robert A. Wax
Primary Examiner
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